DRAFT
DEFT Meeting Notes
10/29/98
1:00-5:00

Participants
Elise Holland, Bruce Herbold, Peter Rhoads, Pete Chadwick, Mike Fris, Jim White, Gary Stern, Karl Halupka, Dave Fullerton, Curtis Creel, BJ Miller, Dave Briggs, Peter Louie, Jim Snow, Paul Fujitani, Larry Brown, George Barnes, Sushil Arora, Joe Miyamoto, Jim Buell, Tom Cannon, Ron Ott

Agenda:
i. Define basic set of restriction and relaxation rules.
ii. Clarify Issues - Hypotheses

Actions:
1. Jim B and Elise would continue to develop issues.
2. George will develop preliminary water costs for some biol restriction actions.
3. See notes for more action items (in bold).

Highlights:

I. No clear consensus on issues discussion - will continue to develop.
II. Attempted to developed rules for relaxation and restrictions for each of our new scenarios for each target species/race group.
III. Preliminary estimates of blocks of water required so George can tell us potential water costs.

Issue Clarification:
* grouped issues into lack of substantive difference, arguable, and differing opinions.
* Minority and majority assumptions
* Ron warned that issues have to be related to management decisions. We have to show how results vary with hypotheses; how we would evaluate differences; and what we recommend if we can't determine differences.
* Jim W suggested three options: a causes b; a does not cause b; or c causes b.

Issues lacking substantive differences:
4. Agree that fish that move into Delta have less chance of survival.
5. Agree that reducing exports when fish are there reduces mortality/increases survival.
6. Agree that fish are lost in pre-salvage, screening, salvage, and handling and transport.
7. Agree that habitat improvements in central Delta would slow fish movement to pumps

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and improve food supply, and fish growth and survival.

Issues that are arguable:
1. Minority feels X2 is not way to improve Delta hydrodynamics. Majority focus on long-term averages of X2 is problem - system and response is more dynamic (e.g., ignore tidal influences). Problem with causal factors.
2. QWEST.
3. Joe M added: Effects of reducing flow below Hood in Sac River from Hood diversion.

Consensus: Jim B and Elise would continue to develop issues.

Task 1 - Restrictions and Relaxation Rules

Goals: reach consensus; define nature of disagreements; and develop questions for Policy.
DEFT should provide some sense of what we would do to relax or restrict for each scenario.
Delta Smelt adults:

1. Bruce leads effort: problem is that when smelt are there, then we need 14 days of export reductions. Monitoring and response times are not perfect, so we should plan more days of export reductions. How do we allow flex ops to work - how will monitoring work to guide flex op?. How long, how far, and what do we change? Imperfection of foresight? What trigger and what level of treatment?
2. Adult delta smelt in winter:
7 days CVP
4 days SWP
Monitoring and slop will tell us which 7 days.
More in wet years, less in dry years
Option: pump high until they come; then cutback when they show up.
Option: cutback only if distribution observed in monitoring so indicates
Option: set aside a block of water rather than cutback a number of days - at least for modelling purposes.

Proposal:
Delta Smelt Adults (following dry and Critical Dry Years) (Jan-Mar)
--- CVP (1-25)10 days of cutbacks to 900 cfs
--- SWP (2-16)14 days of cutbacks to 300 cfs
--- timing different for each plant
--- controls on other plant while one is cutback??
--- X2 maybe - depending on if Delta AFRP is being applied - if yes, then no other X2 changes is needed.

3. **Delta smelt young in spring:** (Mar-Jun)
Proposal:

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--- SWP (4-8)8 days of cutbacks to 300 cfs.
--- CVP (6-12)12 days of cutbacks to 900 cfs.

4.   **Salmon Fry in winter:**(Dec-Feb)
      Proposal:
      --- high flow years; up to 8 weeks (Jim B: why worry about wet years because E/I is very low.)
      --- habitat important in long term
      --- How often do we get measurable benefit from extending VAMP 30-45-90 days/
      --- improved screens provide more protections
      --- could purchase water to cutback exports
      --- Is Habitat along run and improved screens enough?
      --- HOR and DCC are important tools
      --- export cutbacks in wet years carry limited risk to water supply - just fill San Luis a little later.
Action: Gary will look into San Joaquin fry - others invited to look into.

5.   **Fall Run San Joaquin Smolts in Spring:**(Mar-Jun)
      Proposal:
      --- extend VAMP to cover; slide VAMP timing as needed
      --- some years will have more days than others
      --- exports only or flow as well in extended VAMP?
      --- Monitoring at Mossdale and tribs. could be triggers (Comment: experience has been frustrating in this area. **Action:** look into Mossdale and trib monitoring as potential triggers.)
      --- 60 day sliding period with export reduction to 1500-3000 cfs with contingency for late pulse (B.J.: this would be a huge water supply cost, why even take this trip? Gary: lose high proportion of San Joaquin smolt even in wet years - need 60 day protection)
      --- triggers also from salvage (for restrictions and relaxation)
      --- flex flows or exports; extend VAMP
      --- **Action:** consider a QWEST rule

6.   **Spring Run Smolts in Fall:**(Nov-Jan)
      Proposal:
      --- condition of movement: flow pulses
      --- close DCC (Bruce: open during periodic flow/storm pulses to protect WQ; Jim W: only need protection when DCC is open; George: extra pumps will be helpful to capture pulses, then cutback as flows decline and salvage increases.)
      --- look to salvage as a trigger (Jim W: worried about protection without E/I standard. Jim B: operate around the fish with early warning system. Elise would be ok with separating triggers for spring and fall run fish and erring on side of protection for spring run to ensure their protection.)
      --- look to tribs for triggers

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--- clean up QWEST variable and consider restriction based on it; set control as QWEST greater than 0 for three weeks. **(Action:** turn to NoName for water cost of this QWEST variable. Ron: be sure to include benefit of Hood as well as DCC on QWEST.)
--- continue experiments on spring run cwt releases to provide more info
--- **George Barns look a statistics of QWEST when DCC is closed.**

7. **Steelhead:** (Feb-May)
   Proposal:
   --- CVP 8 days of export reductions
   --- SWP 9 days of reductions
   --- Gary S: important to take care of tails of peaks as they are more likely wild fish, with peaks being predominantly hatchery fish. Jim W: February is typical hatchery stocking time.
   --- How important is salvage of Steelhead with 100% salvage and survival.
   --- Pete C: concerned with protecting them with exports given 95-100 % salvage survival and new screen facilities. Pete R: NMFS stated Delta was not a problem for steelhead.
   --- Carl H: Though steelhead overlap for protection for other species, they do have spiky salvage that could be protected by 1-to-3 seven-day units of export restrictions. **Action:** We should also look at QWEST as a steelhead trigger.
   --- Bruce: **Action:** need to look at a salvage trigger for steelhead.

8. **Striped Bass in late spring and summer:**
   Proposal:
   --- CVP 23 days
   --- SWP 12 days
   --- dry years - CVP 17 days; SWP 10 days(May-Jul)
   --- wet year - CVP 30 days; SWP 15 days(Jun-Aug)
   --- Pete C: consider X2 criteria in dry years - would benefit more than just striped bass.
   --- Bruce: keeping X2 from moving upstream in July may be good option in lieu of eliminating protection from E/I ratio standard. Some export reductions may also help, as would other measures in Delta AFRP.
   --- **Action:** continue to consider what to do for striped bass. Also how well they are protected by other measures.

General Discussion Items:
1. Pete C: Restrictions and relaxations would vary with scenarios; and by water year type. Cost would vary greatly among scenarios and year type.
2. Mike F: We are trying to develop an approach for all scenarios and develop water costs - trying to get a common ground and how to model scenarios.
3. Elise: trigger should not only identify biol trigger, but it should specify what you do with operations when it is triggered.
4. **Action:** Use Sheila Green's plots dividing salmon races to help define rules.